Establishing the Fact of Substantial Origination

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In the Name of God, the Most Gracious, the Most Merciful.

All praise is due to God. May He elevate the mention of His final Prophet and Messenger, Muhammad ﷺ.

The argument from substantial origination is perhaps the strongest argument for theism. The argument, mentioned in the Qur'an, is predicated on the fact of "substantial origination", namely: the fact that matter literally comes into existence and goes out of existence in succession.

The "substantial origination" of matter is a phenomenon that requires a suitable causal explanation, namely an originator cause. That originator cause cannot be within the material substrate, but rather

must exist apart from it. Since the originator cause is distinct from the material substrate, it exists outside the set of all originating substances, which logically entails that it is an eternal Originator, a Creator being who has always existed in the past and will forever exist in the future.

This argument from substantial origination was mentioned in the Qur'an in the chapter of al-Tur, in the form of the rhetorical question: {**Were they created by nothing, or were they the creators of themselves?**} The verse implies that both options are impossible, meaning that the originating substances are instead created by an eternal Originator.

Connected to the argument from substantial origination is the argument from contingency. This argument is predicated on the "contingency" of the substances of the material world, namely: the fact that the very substance of material entities accepts existence and nonexistence. The argument from contingency can be explained as follows:

Since the very substance of a material entity accepts existence and nonexistence, it can have absolutely no existence from its own self, but rather must utterly depend on something beyond itself for its existence. But adding such a contingent substance, that has no existence from itself, to others of the same kind does not render the entirety of substances into existence. Rather, the addition deepens the contingency. Thus, the whole entirety has no existence from its own

self. Therefore, the entire material substrate – that is, the entire collection of infinitely many dependent substances that exist in succession – depends on an external Maker, namely: a God who necessarily exists and is absolutely independent in every respect.

The relationship between origination and contingency

The facts of contingency and substantial origination are mutually concomitant descriptions; they always come together such that one cannot be true without the other.

An originating substance is contingent – i.e. its very substance accepts existence and nonexistence – by virtue of the fact that it was once completely absent before it later came into existence. Likewise, a contingently existing substance is originated by virtue of the fact that its existence must have been preceded by a material state that carried the possibility of its subsequent existence. Without that prior material state that carried the possibility of its future origination, the substance's contingency would have no grounding and would be baseless.

Thus, each of the contingency of substances and their substantial origination serves as a conclusive evidence for the eternal, necessary God, who exists above the material system, perpetually originating material entities and removing them from existence in succession.

The essence of the materialist confusion

Unfortunately, materialists do not appreciate the conclusive Qur'anic arguments for God's existence, usually because they doubt the very fact of "substantial origination". In their view, matter does not literally originate. Instead, everything is a reconfiguration of already existing matter. The material substrate in their view is a persisting entity that merely takes on new forms and arrangements. Accordingly, it is these arrangements that come into existence and cease to exist in succession, not the material energy itself.

Similarly, because materialists doubt the fact of "substantial origination", they do not understand "contingency" to mean that the very substances of material entities accept existence and nonexistence such that they have absolutely no existence from their own selves. Rather, they hold that it is merely the configurations that accept existence and nonexistence, as evidenced by the continuous rearrangement of matter. Thus, their appreciation of the fact of "contingency" is also severely lacking in this respect.

This explains why materialists unhesitatingly substitute the material substrate for God. Rather than thinking of the world as a collection of distinct substances that literally come into existence and go out of existence in succession through the agency of an external Cause, materialists tend to think of the world as a self-sufficient, singular entity that perpetually and independently "acts" by taking on new forms in

succession. The successive rearrangement within the material substrate replaces the "substantial origination" of the matter itself in their view, while the ability of the material substrate to rearrange into new forms replaces the "contingency" of the matter itself, namely: the possibility of the very matter substance to exist after it is not there.

Put differently, materialists godlessly conceive of the universe as an eternal, enormous substance that continuously "acts" by rearranging in accordance with the laws of physics, very much like God – in the Taymiyyan view – is an eternal Creator being who perpetually speaks and acts in succession in accordance with His perfect wisdom and mercy.

Considering the above, it becomes clear that establishing the fact of "substantial origination" is far from optional; it is essential. It marks the difference between successfully demonstrating God's existence in the modern context, and failing to do so adequately.

While it is true that the fact of "substantial origination" ought to be intuitive and self-evident by default, it is today largely mistrusted. This calls for a careful justification of "substantial origination" through sound rational arguments and empirical evidence. In this thread, we provide two rational arguments for "substantial origination", one from (i) causal influence across material systems, and another from (ii) the impossibility of infinite actual division, followed by (iii) empirical evidence from particle physics.

The first argument: material causation

To explain the first evidence from causal influence across material systems, let us present an accurate philosophical account of what material causation actually entails.

Scientifically speaking, causation in the natural world involves the transfer of energy across systems. Whenever a material system acts on another material system, energy flows from the first system to the second. For example, when a stove heats a pot of water, heat energy from the stove flows to the pot. Without such energy transfers, causation in the natural world becomes meaningless and impossible.

Let us now reflect on what this energy transfer actually means ontologically. Logically speaking, it is impossible for the very same attribute to subsist in two different substrates. It is impossible, for example, for the very same power to subsist in two different persons, or for the very same speech to subsist in two different speakers. In the same way, it is impossible for the very same heat energy to subsist in both the stove and the pot of water.

More explicitly, the very same heat energy does not somehow detach from the stove and move on to exist in the pot of water. The energy transfer is not a literal "flow" or relocation of the same thing from the stove to the pot. Instead, this process is a genuine case of origination

where the energy content of one system literally annihilates, giving rise to a totally new, non-identical energy content in a different system.

In other words, the stove genuinely loses some of its existence and ontologically positive content, while the pot of water genuinely gains some of its existence and ontologically positive content, in the form of kinetic energy in this specific example.

This fact applies universally to all created systems. Material causation, by definition, involves energy shifts across systems. These energy shifts across the systems, in turn, point to an external Originator, a God above the material systems who endows them with partial existence and annihilates part of their existence in the divinely guided processes of material causation and interaction.

In this way, the very multiplicity of material systems in the universe, and the fact that they necessarily influence one another, is an evidence that points to an external Cause for the universe. The physical contrasting and interdependence between material systems – such as heaven and earth, the night and the day, the sun and the moon, the land and the sea – points to the independent God who creates and sustains the entirety of material existence from above. And the very fact that the motions and attributes of the natural bodies arise through external material causes is evidence for an eternal God who runs the whole show, originating the motions and attributes therein.

So, the next time you look at the clouds in the sky as they are being beautifully shaped by the moving winds, appreciate that there is a genuine origination going on in the process of cloud formation. The existence of the cloud system genuinely increases as it is caused into motion by the winds, while that of the wind system genuinely decreases, through the creative agency of God. The Almighty God continuously acts on the world by His will, directing the motions of created bodies, and originating their energy content, out of and by means of external secondary causes and material conditions.

This nuance is perfectly captured by the famous Taymiyyan principle which says: "Every substrate of events that are caused by another is originated by God". The fact that clouds gain energy and attributes from external causes indicates their ultimate dependence on the Originator.

Note that this Taymiyyan principle is not to be confused with the false theological principle, adopted by many Kalam theologians, which states: "Every substrate of events is originated by God". Indeed, such a false principle is contradicted by the fact that God qualifies as a substrate of divine volitions and actions that originate within His essence in succession. God’s voluntary activity does not undermine His eternality or imply that He depends on an external Cause.

Unlike created systems, God does not gain His attributes through external material or efficient causes. Rather, His successive volitions are a necessary concomitant of His perfection, and He acts in and of Himself

without assistance from an external agent. God's essence is eternally perfect, intact, and self-contained. He neither gains energy from external systems, nor loses energy to them. There is no energy exchange between God and the material world that would require an external originator.

Taking the argument to its full conclusions

Importantly, once it is recognized that material systems lose and gain *some* of their existence and ontological content through their interactions, it will also be recognized that they, in principle, can lose and gain their *entire* existence through the interactions. It is not just energy content that annihilates from the material substrates and is lost to the surroundings. Rather, in some physical processes, the very substrates themselves can be annihilated, losing their entire existence to their surroundings.

This intuition is not merely philosophical; it is proven experimentally. It is today understood that matter and energy are interchangeable. The matter substance can annihilate entirely, changing into energy in the surroundings, before it is re-created out of it. This process is not a reconfiguration of matter, but is rather a genuine example of origination of substance, where matter literally ceases into energy in the surroundings and comes into existence therefrom, thus establishing the fact of "substantial origination".

In other words, material causation points to an external Originator who not only endows material systems with part of their existence and removes it, such as their energy content, but who also endows them with their entire existence and fully removes it through the natural processes.

Note that the interchangeability of matter and energy is unique to created systems; it is a feature of material systems that points to a God who voluntarily creates the systems and sustains them in succession. As for God's essence, it is eternal, permanent, and indestructible. His essence carries the voluntary attributes arising within it in succession, but is not interchangeable with these attributes. Otherwise, God's essence would itself require an external originator.

The spiritual side of substantial origination

When the evidence for "substantial origination" in the processes of material causation is properly understood and internalized, it allows a materialist to perceive of natural phenomena, those involving biological and chemical changes, in a new, awesome light. The door widely opens to appreciating that the plants that sprout from the earth, the flowers that blossom in the summer, and the baby that grows in its mother's belly involve a "substantial origination" that is far more exciting than mere rearrangements of matter.

More explicitly, it becomes possible to appreciate that God literally originates new substances in place of completely different ones, demonstrating His unparalleled power over creation and His unique ability to bring forth new realities that once did not exist.

Consider that the formation of clouds was demonstrated to involve a degree of genuine origination (of energy content) through the material interactions between the winds and the clouds. Just how much more origination must be involved in the biological and chemical processes, which involve far more intricate and delicate components than cloud formation, parts that materially influence one another on every level in harmonious and amazing processes.

Every chemical and biological process exemplifies this reality of origination. Chemical bonds arise in new energy states—new ontological structures—and their breaking or formation involves the release and absorption of energy, which is a genuine case of origination and annihilation. Likewise, metabolic processes continually convert energy, which reveals an ongoing "substantial origination" woven into the very fabric of living things.

If the process of cloud formation counts as a sound evidence for the creative agency of an eternal Originator, as previously demonstrated, then the birth of a child and the budding of a plant are an even greater evidence for that creative agency.

The second argument: the impossibility of infinite divisibility

Having explained the argument from material causation, let us now move on to the second argument for "substantial origination", namely: the argument from the impossibility of infinite actual division. Ibn Taymiyyah articulated this argument in a number of his works, including in Bayan Talbis al-Jahmiyyah. This specific argument convinced me of the fact of "substantial origination" long ago, when I finally understood that the observed natural processes are not merely a rearrangement of matter.

The argument from the impossibility of infinite division, which is fully explained in "Ibn Taymiyyah on Creation ex Materia", can be summarized as follows:

1- The macroscopic material bodies of the natural world are divisible into smaller parts, in the sense that they can be actually separated into smaller pieces that are located in distinct spaces.

2- This process of actual division cannot go on forever as Aristotelean philosophers claim. Otherwise, an infinite number of particles would be existing all at once within the finite boundaries of the material bodies, which amounts to an impossible actual infinite.

3- Likewise, the process of division cannot terminate at point-sized, volume-less particles after a finite number of divisions, contrary to what

some Kalam theologians assert. This is because it is impossible for any matter particle to exist without volume or dimensions.

4- Thus, the division must terminate at basic matter constituents that have size and volume, ones which can therefore be subjected to a dividing "act" or some resembling process, but which cannot actually separate into smaller parts upon this further division.

5- Instead, when these basic matter constituents are overpowered and subjected to the appropriate "dividing" means, they logically must cease to exist, changing into totally different things that begin to exist. This demonstrates the fact of "substantial change".

In other words, without substantial change, one must either (i) posit that the basic matter constituents are dimensionless (to avoid the possibility of subjecting them to dividing "acts"), (ii) posit that there exists an actually infinite number of matter constituents within the boundaries of the material universe (to allow for an uninterrupted sequence of actual division), or worse (iii) assert, contrary to empirical evidence, that the matter constituents are immutable altogether (to dismiss this entire investigation as meaningless).

Since all three options are false, the fact of "substantial origination" is true. The substances of the material bodies cannot continue to exist as they are divided further at the deeper levels, but rather must eventually annihilate at some final point of division.

Amazingly, Ibn Taymiyyah's argument is consistent with modern science, and is supported experimentally by chemistry and particle physics. For example, it is today recognized that a body of water consists of a finite number of water molecules which, when subjected to "dividing" conditions in the form of suitable chemical reactions, change into the totally different substances of hydrogen and oxygen.

If a materialist chooses to insist that chemical processes do not involve any origination or annihilation of substance, and that the very building blocks of hydrogen and oxygen persist through the chemical reactions, then one can easily respond by pushing the question down to the deeper mereological levels. This is because the breaking down of molecular structures eventually terminates at the subatomic level of elementary matter particles, such as the quarks and the electrons.

These subatomic matter particles, just like the molecular structures, are neither dimensionless nor immutable. Rather, they can be subjected to physical processes which, at least philosophically, resemble the dividing "act" mentioned earlier, processes such as particle-antiparticle collisions. The quarks and electrons literally annihilate when they collide with their antiparticle counterparts, giving rise to light energy (photons). More explicitly, the fundamental matter particles genuinely cease to exist in interactions at the subatomic level, demonstrating the fact of "substantial origination" in a way that is strikingly analogous to Ibn Taymiyyah's argument from the impossibility of infinite division.

Once it is properly understood that matter originates substantially out of energy and annihilates back into energy at the subatomic levels, the speculation that matter also annihilates and originates substantially in chemical reactions at the higher molecular levels becomes philosophically tenable. In this view, the material bodies change substantially not just at a singular, fundamental point of "division", but rather at multiple, scientifically identifiable points of "division" as they are divided further and further.

Accordingly, it becomes possible for a materialist scientist to appreciate that trees originate entirely as new substances out of the earth, and that a human child originates entirely as a new substance in the stages of fetal development, making the belief in the eternal Originator not just a conclusive rational entailment of modern physics, but also a belief that is direct, intuitive, and highly appealing.

The empirical evidence

Having explained the second rational argument for "substantial origination", we now move on to the final part of the thread, where we comment on the empirical evidence for "substantial origination".

Originally, by their instinctive intelligence and natural disposition (fitra), human children are able to identify the gradual emergence of natural phenomena – such as animals, trees, and minerals – as clear instances

of "substantial origination". However, in modern times, this appreciation is often distorted from an early age through false philosophical indoctrination, misleadingly presented in the guise of scientific education. This harmful indoctrination causes many intelligent students to write off natural processes as reconfigurations of already existing matter, leading them down the path of atheistic materialism as they grow older.

For this reason, presenting alternative examples of "substantial origination" from particle physics can be of vital importance. It can help students preserve their original intuitions, and see through the irrationality of the atheistic worldview, before it is late. A robust example of "substantial origination" from particle physics is this: the creation and annihilation of matter.

In Matter creation, light energy changes into matter and antimatter particle pairs. Photons produce newly created electrons and positrons, or newly created quark-antiquark pairs. This change is not a mere reconfiguration of the same material realities, for the ingredients before and after this process are not numerically identical. From a scientific standpoint, quarks and electrons are not reducible to the photons from which they arise. They constitute fundamentally different categories of subatomic particles, characterized by wholly distinct properties.

Considering the above, the processes of Matter creation and Annihilation are properly understood to involve a complete, substantial origination and annihilation of material entities.

Final remark

Note that some philosophers may attempt to avoid the clear implication of "substantial origination" by denying the ontology of subatomic particles altogether, promoting instead a metaphysically confused field ontology in which the universe consists of eternally interacting quantum fields. In this false yet prevalent view, quantum fields exist ontologically, but not the particles themselves, which are mere excitations in said fields.

It should be stressed, therefore, that the correct philosophical view attributes positive existence to the "excitations" themselves, not to the quantum fields, which are only mathematical tools useful for calculation. After all, a scientifically informed ontology must respect the axiomatic principles, such as the principle of physicalism, if it is to be philosophically sound. Science may refine our understanding of the axiomatic principles, but without completely overturning them.

This concludes our justification of the fact of "substantial origination", completing the demonstration of the eternal Originator. Allah knows best.

May Allah elevate the mention of His Prophet Muhammad ﷺ, his household, and his companions. May He send upon them His peace and His blessings.

And the last of our prayers is:

{All praise is due to God, the Lord of the worlds}.